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EXAMINER
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MOORE, IAN N

ART UNIT	PAPER NUMBER
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2616

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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## Office Action Summary

### Application No.

10/765,655

### Applicant(s)

RORIE, HEATHER N.

### Examiner

Ian N. Moore

### Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 18 and 20-26 is/are rejected.
- 7) ☒ Claim(s) 16, 17, 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

1. Claims 7-10 are objected to because of the following informalities:

**Claim 7** recites, duplicate limitations of “*means for designating a fail-over virtual router interface on the first physical router based on the address information obtained from the second physical router*” in lines 15-17 and lines 18-20. It is suggested to remove the duplicate limitation.

**Claims 8-10** are also objected since they are depended upon objected claim 7 as set forth above.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11, 12, 13 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Alexander (US005949753A).

**Regarding Claim 11**, Alexander discloses a method of setting up router redundancy (see FIG. 4, method for setting primary and backup routers by the LAN Emulation Server (LES) 316) between a first (see FIG. 3, primary Router 312) and a second physical router (see FIG. 3, backup router 314), comprising:

executing program instructions (see FIG. 4, executing/processing method/programs) to communicate, between the first physical router and the second physical router (see FIG. 4, S404,406; see col. 3, line 7-50; see col. 4, line 38-42, 43-45; LES 316 communicates/conveys/transmits common assigned IP address 3 (IP3) or MAC address 3 (MAC3) information between primary router 312 and backup router 214), address information assigned to the first physical router and address information assigned to the second physical router (see FIG. 4, S404,406,420; see col. 3, line 7-50; see col. 4, line 38-42 to col. 5, line 6; IP3/M3 address information commonly assigned to the primary router 312 and backup router 214; also see FIG. 3);

designating a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 306) for the first physical router (see FIG. 3, for primary router 312) on the second physical router based on the address information assigned to the first physical router (see FIG. 4, S408; LES 316 registers/designates LEC 306 on the backup router 314 for the primary router 312 according to IP3/MAC3 information assigned to the primary router 312; see FIG. 3, see col. 3, line 25-50; see col. 4, line 44-52);

designating a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 308) for the second physical router (see FIG. 3, for backup router 214) on the first physical router based on the address information assigned to the second physical router (see FIG. 4, S416-420; LES 316 registers/designates LEC 308 on the primary router 312 for the backup router 314 according to IP3/MAC3 information assigned to the backup router 314; see FIG. 3, see col. 3, line 25-50; see col. 4, line 38-42 to col. 5, line 6).

**Regarding Claim 12**, Alexander discloses assigning address information (see FIG. 3, assigning/registers/setup IP address 3 (IP3) or MAC address 3 (MAC 3) information) to the fail-over virtual router interface (see FIG. 3, to LEC 306) for the first physical router (see FIG. 3, for primary router 312) based on the address information assigned to the first physical router (see FIG. 4, S404, 406, S408; according to IP3/MAC3 information assigned to primary router 312's LEC 308; see col. 3, line 25-50; see col. 4, line 44-52).

**Regarding Claim 13**, Alexander discloses assigning a virtual IP address to the fail-over virtual router interface (see FIG. 3, assigning/registers/setup IP address 3 (IP3) to LEC 306) for the first physical router (see FIG. 3, for primary router 312) based on the address information assigned to the first physical router (see FIG. 4, S404, 406, S408; according to IP3/MAC3 information assigned to primary router 312's LEC 308; see col. 3, line 25-50; see col. 4, line 44-52).

**Regarding Claim 18**, Alexander discloses a method of setting up router redundancy between a first (see FIG. 3, primary Router 312) and a second physical router (see FIG. 3, backup router 314), comprising:

assigning an IP address to the first physical router (see FIG. 3, IP address 1 (IP1) to primary router 312) and to the second physical router (see FIG. 3, IP address 2 (IP 2) to backup router 314; see col. 3, line 1-15; see FIG. 3, S404, 406, 420; see col. 3, line 7-50; see col. 4, line 38-42 to col. 5, line 6);

designating a domain of the first physical router and of the second physical router (see FIG. 3, assigning/designating/registering subnet/domain IP0 of primary router 312 and backup router 314 as default gateway; see col. 3, line 7-34);

auto-configuring address information (see FIG. 3, automatically registers/setup IP address 3 (IP3) or MAC address 3 (MAC 3) information) for a virtual router on the second physical router (see FIG. 3, for proxy LAN emulated/virtual client (LEC) 306 on the backup router 306 (i.e. virtual router); see col. 1, line 40-45,56-61; see col. 3, line 15-45) based on the IP address and domain of the first physical router by executing program instructions to communicate between the first and second physical routers (see FIG. 4, S404,406,S408; LES 316 automatically registers/designates address IP3/MAC3 information for a LEC 306 on backup router 314 according to IP1 and subnet/domain IP0 of primary router 312 by executing/processing method/programs (see FIG. 4) to communicates between routers 312 and 314; see col. 3, line 25-50; see col. 4, line 44-52);

auto-configuring address information (see FIG. 3, automatically registers/setup IP address 3 (IP3) or MAC address 3 (MAC 3) information) for a virtual router on the first physical router (see FIG. 3, for proxy LAN emulated/virtual client (LEC) 308 on the primary router 312 (i.e. virtual router); see col. 1, line 40-45,56-61; see col. 3, line 15-45) based on the IP address and domain of the second physical router by executing program instructions to communicate between the first and second physical routers (see FIG. 4, 416-420; LES 316 automatically registers/designates address IP3/MAC3 information for a LEC 308 on primary router 312 according to IP2 and subnet/domain IP0 of backup router 314 by executing/processing method/programs (see FIG. 4) to communicates between routers 312 and 314; see col. 3, line 25-50; see col. 4, line 38-42 to col. 5, line 6).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7-10, and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander (US005949753A) in view of Datta (US006493341B1).

**Regarding Claim 1**, Alexander discloses a network device having router functionality (see FIG. 3, a LAN Emulation Server (LES) 316 which routes/switch data; see col. 3, line 17-21), comprising:

program instructions (see FIG. 4, method/program instructions, S404, 406, 408) to designate a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 306) for a first physical router (see FIG. 3, Router 312; see col. 3, line 1-6) on a second physical router (see FIG. 3, backup Router 314; see col. 3, line 1-6) based on address information of the first physical router (see FIG. 3, according to IP/M3 address of primary router 312) obtained via communication (see FIG. 3, ELAN 310) between the first physical router and the second physical router (see FIG. 4, S408; LES 316 registers/designates LEC 306 of backup router 314 according to IP3/MAC3 communicated/conveyed from router 312 via communication over network 310; see col. 3, line 25-50; see col. 4, line 44-52).

designate a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 308) for the second physical router (see FIG. 3, Router 314; see col. 3, line 1-6) on the first physical router (see FIG. 3, primary Router 312; see col. 3, line 1-6)

based on address information of the second physical router (see FIG. 3, according to IP/M3 address of backup router 314) obtained via communication (see FIG. 3, ELAN 310) between the first physical router and the second physical router (see FIG. 4, S416-420; LES 316 registers/designates LEC 308 of primary router 312 according to IP3/MAC3 communicated/conveyed from router 314 via communication over network 310; see col. 3, line 25-50; see col. 4, line 38-42 to col. 5, line 6 ).

Alexander does not explicitly disclose a processor; memory in communication with the processor, and program instructions stored in memory and executable on the processor.

However, it is well known in the art that a network management system/server/switch/hub contains a processor/CPU, memory in communication with the processor, and program instructions stored in memory and executable on the processor in order to perform the methods/steps. In particular, Datta teaches a network device (see FIG. 2, 4, controller 202) comprising:

a processor (see col. 7, line 1-7; one processor);

memory in communication with the processor (see col. 7, line 1-7; memory accessible to the processor); and

program instructions stored in memory and executable on the processor (see col. 7, line 1-7; software contains executable instructions and data which are stored in the memory and which guide operation of the processor).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a processor; memory in communication with the processor, and program instructions stored in memory and executable on the processor, as taught by Datta



in the system of Alexander, so that it would guide operation of the processor in order to perform the routing functions; see Datta col. 7, line 5-7; also both processor and memory are required in order to execute or perform the method/procedure of the system of Alexander.

**Regarding Claim 2**, Alexander discloses program instructions which execute to assign an IP address for the fail-over virtual router interface of the second physical router (see FIG. 4, S408; LES 316 registers/assigns IP3 address for LEC 306 of backup router 314; see col. 3, line 25-50; see col. 4, line 44-52).

**Regarding Claim 3**, Alexander discloses wherein the network device is a management station (see FIG. 3, a LAN Emulation Server (LES) 316 manages/controls the network 300; see col. 3, line 17-21).

**Regarding Claim 4**, Alexander discloses wherein the network device is a network switch (see FIG. 3, a LAN Emulation Server (LES) 316 which routes/switch data; see col. 3, line 17-21). Datta also discloses wherein the network device is a network switch (see col. 7, line 1-6; controller 30 is a router or bridge which performs switching).

**Regarding Claim 5**, Alexander discloses wherein the network device is a network hub see FIG. 3, a LAN Emulation Server (LES) 316 which routes/hub-ing data between router 312 and 314, and thus it has a hub functionality; see col. 3, line 17-21). Datta also discloses wherein the network device is a network switch (see col. 7, line 1-6; see FIG. 2, controller 30 is a router or bridge with one input from subnet 106 and multiple outputs 210 to routers 110, thus it also has a hub functionality).

**Regarding Claim 7**, Alexander discloses a network management system (see FIG. 3, a system manages/controls by a LAN Emulation Server (LES) 316; see col. 3, line 17-21), comprising:

a first and a second physical router (see FIG. 3, Primary Router 312 and backup Router 314; see col. 3, line 1-6);

a second physical router (see FIG. 3, backup Router 314) including:

means for obtaining (see FIG. 3, LES 316) address information (FIG. 4, S404; LES 316 gets/receives/acquires from IP address 3 (IP3) or MAC address 3 (MAC3) information) from the first physical router (see FIG. 3, from Router 312; see col. 4, line 38-42) and communicating the address information to the second physical router (see FIG. 4, S406; LES 316 communicates/conveys/transmits IP3/MAC3 to backup router 314; see col. 3, line 7-50; see col. 4, line 43-45) and

means for designating (see FIG. 3, LES 316) a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 306) on the second physical router (see FIG. 3, backup Router 314) based on address information obtained from the first physical router (see FIG. 4, S408; LES 316 registers/designates LEC 306 of backup router 314 according to IP3/MAC3 receives from router 312; see col. 3, line 25-50; see col. 4, line 44-52); and

the first physical router (see FIG. 3, primary Router 314) including:

means for designating (see FIG. 3, LES 316) a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 308) on the first physical router (see FIG. 3, primary Router 312) based on address information obtained from the second physical router (see FIG. 4, S408, 416-420; LES 316 registers/designates LEC 308 of primary router 312

according to IP3/MAC3 receives from backup router 314; see col. 3, line 25-50; see col. 4, line 38-42 to col. 5, line 6); and

means for designating (see FIG. 3, LES 316) a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 308) on the first physical router (see FIG. 3, primary Router 312) based on address information obtained from the second physical router (see FIG. 4, S408,416-420; LES 316 registers/designates LEC 308 of primary router 312 according to IP3/MAC3 receives from backup router 314; see col. 3, line 25-50; see col. 4, line 38-42 to col. 5, line 6).

Alexander does not explicitly disclose, “a processor; memory in communication with the processor”.

However, it is well known in the art that a router or switch contains a processor/CPU and memory in communication with the processor in order to perform the methods/steps. In particular, Datta teaches a router (see FIG. 2, 4, controller 202) comprising:

a processor (see col. 7, line 1-7; one processor);

memory in communication with the processor (see col. 7, line 1-7; memory accessible to the processor).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide “a processor; memory in communication with the processor”, as taught by Datta in the system of Alexander, so that it would enable the software, which contains executable instructions and data stored in the memory, to guide operation of the processor in order to perform the routing functions; see Datta col. 7, line 5-7; also both processor

and memory are required in order to execute or perform the method/procedure of the system of Alexander.

**Regarding Claim 8**, the combined system of Alexander and Datta discloses wherein the means for obtaining the address information includes program instructions which execute as set forth above in claim 1. Alexander further discloses executing in the first physical router to transfer address information to the second physical router (see FIG. 2, LEC 308 of the primary router 312 executes/processes to communicate/convey/transmit IP3/MAC3 information to LEC 306 of the backup router 314; see col. 3, line 7-50; see col. 4, line 7-45).

**Regarding Claim 9**, the combined system of Alexander and Datta discloses wherein the means for obtaining the address information includes program instructions which execute as set forth above in claim 1. Alexander further discloses executing in the second physical router to receive address information from the first physical router (see FIG. 2, LEC 309 of the backup router 314 executes/processes communicated/conveyed/received IP3/MAC3 information from LEC 308 of the primary router 312; see col. 3, line 7-50; see col. 4, line 7-45).

**Regarding Claim 10**, the combined system of Alexander and Datta discloses wherein the means for designating the fail-over virtual router interface as set forth above in claim 7. Alexander further discloses program instructions (see FIG. 4, method/program instructions, S404, 406,408; see col. 4, line 7-52).

Alexander does not explicitly disclose executable on the processor.

However, Datta further discloses program instructions stored in the memory and executable on the processor (see col. 7, line 1-7; software contains executables instructions and data that are stored in the memory and which guides the operations of the processor).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide program instructions stored in memory and executable on the processor, as taught by Datta in the system of Alexander, so that it would enable to perform the routing functions; see Datta col. 7, line 5-7; also both processor and memory are required in order to execute or perform the method/procedure of the system of Alexander.

**Regarding Claim 22**, Alexander discloses a program to cause a device (a LAN Emulation Server (LES) 316; see col. 3, line 17-2) perform a method (see FIG. 4, method processed by LES 316), comprising:

executing program instructions (see FIG. 4, executing/processing method/programs) to communicate, between the first physical router and the second physical router (see FIG. 4, S404,406; see col. 3, line 7-50; see col. 4, line 38-42, 43-45; LES 316 communicates/conveys/transmits common assigned IP address 3 (IP3) or MAC address 3 (MAC3) information between primary router 312 and backup router 214), address information assigned to the first physical router and address information assigned to the second physical router (see FIG. 4, S404,406,420; see col. 3, line 7-50; see col. 4, line 38-42 to col. 5, line 6; IP3/M3 address information commonly assigned to the primary router 312 and backup router 214; also see FIG. 3);

designating a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 306) for the first physical router (see FIG. 3, for primary router 312) on the second physical router based on the address information assigned to the first physical router (see FIG. 4, S408; LES 316 registers/designates LEC 306 on the backup router 314 for the

primary router 312 according to IP3/MAC3 information assigned to the primary router 312; see FIG. 3, see col. 3, line 25-50; see col. 4, line 44-52);

designating a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 308) for the second physical router (see FIG. 3, for backup router 214) on the first physical router based on the address information assigned to the second physical router (see FIG. 4, S416-420; LES 316 registers/designates LEC 308 on the primary router 312 for the backup router 314 according to IP3/MAC3 information assigned to the backup router 314; see FIG. 3, see col. 3, line 25-50; see col. 4, line 38-42 to col. 5, line 6).

Alexander does not explicitly disclose, "a computer readable medium".

However, it is well known in the art that a network management system/server/switch/router contains a computer readable medium or memory having a program to cause a device to perform methods/steps. In particular, Datta teaches a computer readable medium having a program (see col. 7, line 1-7; memory stores software instructions) to cause a device (see FIG. 2, 4, controller 202) to perform a methods/steps (see FIG. 4, methods/steps; see col. 7, line 1-7; see col. 23, line 24-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "a computer readable medium", as taught by Datta in the system of Alexander, so that it would enable the software, which contains executable instructions and data stored in the memory, to guide operation of the processor in order to perform the routing functions; see Datta col. 7, line 5-7; also both processor and memory are required in order to execute or perform the method/procedure of the system of Alexander.

**Regarding Claim 23**, Alexander discloses assigning a first IP address (see FIG. 3, assigning/configuring IP1; see col. 3, line 1-35) for a first local area network to the first physical router (see FIG. 3, LAN that couples to primary router 312; see col. 1, line 15-30; see col. 2, line 41-65) and assigning a second IP address (see FIG. 3, assigning/configuring IP2; see col. 3, line 1-35) for a second local area network to the second physical router (see FIG. 3, LAN that couples to backup router 314; see col. 1, line 15-30; see col. 2, line 41-65).

**Regarding Claim 24**, Alexander discloses designating a fail-over virtual router for the first IP address (see FIG. 3, LEC 308 for IP1) and designating a fail-over virtual router for the second IP address (see FIG. 3, LEC 306 for IP2); see col. 3, line 1-40.

**Regarding Claim 25**, Alexander discloses assigning a first IP address (see FIG. 3, assigning/configuring IP2; see col. 3, line 1-35) for a first local area network (see FIG. 3, LAN that couples to router 314; see col. 1, line 15-30; see col. 2, line 41-65) and assigning a second IP address (see FIG. 3, assigning/configuring IP3; see col. 3, line 1-35) for a second local area network to the first physical router (see FIG. 3, LAN that couples to router 312; see col. 1, line 15-30; see col. 2, line 41-65).

**Regarding Claim 26**, Alexander discloses communicating between the first and second physical router using a layer-2 packet (see FIG. 2-3, router 312, router 314 and ATM hosts 104, 110 or end station 302 communicate over a ELAN network 310, thus it is clear that a ATM (i.e. layer 2 protocol) message/packet communicated between the routers; see col. 2, line 41 to col. 3, line 7; see col. 4, line 5-36).

1. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander in view of Datta as applied to claim 1 above, and further in view of Perlman (US005313465A).

**Regarding Claim 6**, the combined system of Alexander and Datta discloses executing program instructions as set forth above. Alexander further discloses communicating an IP address between the first physical router and the second physical router (see FIG. 4, S408; LES 316 communicates/conveys IP3 address between primary router 312 and backup router 314; see col. 3, line 25-50; see col. 4, line 44-52), and designating a domain of the first physical router (see FIG. 3, assigning/designating/registering subnet/domain IP0 of primary router 312 as default gateway; see col. 3, line 7-34).

Neither Alexander nor Datta explicitly discloses “domain identifier”.

However, Perlman discloses communicating domain identifier between first router and second router (see FIG. 1, communicating/conveying domain number/identifier between first router (e.g. R3) and second router (e.g. R1 or R4); see col. 1, line 56 to col. 2, line 2; see col. 4, line 43 to col. 6, line 10; see col. 7, line 14-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to communicate domain identifier/number, as taught by Perlman, in the combined system of Alexander and Datta, so that it would provide merging networks across a common backbone network and facilitates the interconnection of networks operation; see Perlman col. 1, line 50-56.

2. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander in view of Kanekar (US007006431B1).



**Regarding Claim 14**, Alexander discloses assigning to the fail-over virtual router interface for the first physical router (see FIG. 3, assigning/registers/setup IP address 3 (IP3) to LEC 306) based on the address information assigned to the first physical router (see FIG. 4, S404, 406, S408; according to IP3/MAC3 information assigned to primary router 312's LEC 308; see col. 3, line 25-50; see col. 4, line 44-52).

Alexander does not explicitly disclose "a mask length".

However, Kanekar teaches assigning a mask length (see FIG. 4, configuration mask 418 (which has a length) 410) to the virtual router interface (see FIG. 2, shared interface 108 of R2; see FIG. 3, shared interface 206 of R2; see col. 5, line 40-45; col. 6, line 5-20) based on the address information assigned to the first physical router (see FIG. 3, configuration infor 208 (i.e. see FIG. 4, configuration file 402) is sent from master router R1 to the shared interface of slave router R3 in order to configure a mask which has length 418; see col. 7, line 1-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide configuration masking length, as taught by Kanekar in the system of Alexander, so that it would reduce switchover time upon failure; see Kanekar col. 2, line 11-16.

3. Claims 15, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander in view of Singh (US 20050177762A1).

**Regarding Claim 15**, Alexander discloses assigning to the fail-over virtual router interface for the first physical router (see FIG. 3, assigning/registers/setup IP address 3 (IP3) to LEC 306) based on the address information assigned to the first physical router (see FIG. 4,

S404, 406, S408; according to IP3/MAC3 information assigned to primary router 312's LEC 308; see col. 3, line 25-50; see col. 4, line 44-52).

Alexander does not explicitly disclose "a router identifier".

However, Singh teaches assigning a router identifier to the virtual router interface (see FIG. 2, configuring/assigning virtual router ID number of the logical interface 242/244) based on the address information assigned to the first physical router (see FIG. 2, according to advertisement packet that includes a field that indicates the first virtual router ID of the network work device 210/211; see page 3, paragraph 30-31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a router identifier, as taught by Singh in the system of Alexander, so that it would provide efficient, conjoined fail-over of logical interfaces; see Singh page 1, paragraph 1,4.

**Regarding Claim 20**, Alexander discloses communicating between the first physical router and the second physical router (see FIG. 4, S406; LES 316 communicates/conveys between primary router 312 and backup router 314) to obtain an address information assigned to the first physical router (FIG. 4, S404; in order to gets/receives/acquires IP address 3 (IP3) or MAC address 3 (MAC3) information assigns/configures to the primary router 312); see col. 3, line 7-50; see col. 4, line 43-45.

Alexander does not explicitly disclose "a router identifier".

However, Singh teaches communicating between the first physical router (see FIG. 2, communicates between network device 210) and the second physical router (see FIG. 2, and network device 211) to obtain a router identifier assigned to the first physical router (see FIG. 2,

to get/receive/acquire virtual router ID assigned to the logical interface 242); see page 3, paragraph 30-31.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide “a router identifier”, as taught by Singh in the system of Alexander, so that it would provide efficient, conjoined fail-over of logical interfaces; see Singh page 1, paragraph 1,4.

**Regarding Claim 21**, Alexander discloses designating address information of the second physical router based upon the address information obtained from the first physical router (see FIG. 4, S408; LES 316 registers/designates LEC; see col. 3, line 25-50; see col. 4, line 44-52).

Alexander does not explicitly disclose “a router identifier”.

However, Singh teaches designating a router identifier to the second physical router (see FIG. 2, configuring/assigning virtual router ID number to the network device 211) based on the address information assigned to the first physical router (see FIG. 2, according to advertisement packet that includes a field that indicates the first virtual router ID of the network work device 210; see page 3, paragraph 30-31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a router identifier, as taught by Singh in the system of Alexander, so that it would provide efficient, conjoined fail-over of logical interfaces; see Singh page 1, paragraph 1,4.

*Allowable Subject Matter*

4. **Claim 16, 17 and 19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

5. Applicant's arguments with respect to claims 1-15, 18, and 20-26 have been considered but are moot in view of the new ground(s) of rejection.

**Regarding claims 1-15, 18, 20-26, the applicant argued that**, "...applicant has incorporated subject matter deemed allowable by the examiner with respect to currently amended claims 16 and 19 into independent claims 1, 7, 11, 18 and 22..." in page 10.

**In response to applicant's argument, the examiner respectfully disagrees** with the argument above.

Regarding claim 16, (A) the previous action indicated on page 18 that claim 16 would be allowed if rewritten in independent form including all of the limitation of the base claim and any intervening claims, and **(B)** "the claim 16 is allowable over prior art with cited allowable subject matter in combination with other limitations recited in the specified claim 16" (emphasis added).

First, applicant neither incorporate **all** limitation of claim 16 into base claim 11, nor the base claim 11 is rewritten by incorporation **all** limitation of claim 16. Thus, applicant has not conform to the item (A) required by the previous action.

Second, applicant is only selecting portions/pieces from the allowable claim 16 and incorporating the portions of the allowable claim 16, rather than incorporating entire allowable claim 16 as indicated by the previous action. In fact, the previous office clearly indicates that the allowable subject matter is allowable when in combination with other limitations recited in claim 16. Thus, applicant has not conform to the item (B) required by the previous action.

Since applicant has not conformed to both items (A) and (B) set forth above, it is clear that amended the base claim 11 is not present in allowable form, and thus it is not allowable. Moreover, since applicant selectively added portions/pieces from the allowable claim 16 into the base claim 11, it is considered as new issue, and such new issue is subjected to a new grounds rejection.

Regarding claim 19, (A) The previous action indicated on page 19 that claim 19 would be allowed if rewritten in independent form including all of the limitation of the base claim and any intervening claims, and **(B)** “the claim 19 is allowable over prior art with cited allowable subject matter **in combination with other limitations recited in the specified claim 19**” (emphasis added).

First, applicant neither incorporate all limitation of claim 19 into base claim 18, nor the base claim 18 is rewritten by incorporation all limitation of claim 169. Thus, applicant has not conform to the item (A) required by the previous action.

Second, applicant is only selecting portions/pieces from the allowable claim 19 and incorporating the portions of the allowable claim 19, rather than incorporating entire allowable claim 19 as indicated by the previous action. In fact, the previous office clearly indicates that the

allowable subject matter is allowable when in combination with other limitations recited in claim

19. Thus, applicant has not conform to the item (B) required by the previous action.

Since applicant has not conformed to both items (A) and (B) set forth above, it is clear that amended the base claim 19 is not allowable. Moreover, since applicant selectively added portions/pieces from the allowable claim 19 into the base claim 18, it is considered as new issue, and such new issue is subjected to a new grounds rejection.

Claims 1, 7 and 22 are also amended by adding portions/pieces from the allowable claim 16 and 19, and claim 16 and 19 do not depend on any of the base claims 1, 7, 22 from different sets. Thus, such amendment to claim 1, 7 and 22 are also considered as new issue, and such new issue is subjected to a new grounds rejection.

**Regarding claims 1-15, 18, 20-26, the applicant argued that,** "...applicant is unable to locate anywhere in the Alexander reference, a teaching, or suggestion of among other things, "a method of setting a router redundancy between a first and a second physical router that includes: designation....to the second physical router..." as provided by applicant's claim 11...and "a method of setting a router redundancy between a first and a second physical router that includes: auto-configuration address information....to the second physical router..." as provided by applicant's claim 18" in page 10-16.

**In response to applicant's argument, the examiner respectfully disagrees with the argument above.**

Regarding Claim 11, Alexander discloses a method of setting up router redundancy (see FIG. 4, method for setting primary and backup routers by the a LAN Emulation Server (LES) 316) between a first (see FIG. 3, primary Router 312) and a second physical router (see FIG. 3,

backup router 314), comprising: executing program instructions (see FIG. 4, executing/processing method/programs) to communicate, between the first physical router and the second physical router (see FIG. 4, S404,406; see col. 3, line 7-50; see col. 4, line 38-42, 43-45; LES 316 communicates/conveys/transmits common assigned IP address 3 (IP3) or MAC address 3 (MAC3) information between primary router 312 and backup router 214), address information assigned to the first physical router and address information assigned to the second physical router (see FIG. 4, S404,406,420; see col. 3, line 7-50; see col. 4, line 38-42 to col. 5, line 6; IP3/M3 address information commonly assigned to the primary router 312 and backup router 214; also see FIG. 3); designating a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 306) for the first physical router (see FIG. 3, for primary router 312) on the second physical router based on the address information assigned to the first physical router (see FIG. 4, S408; LES 316 registers/designates LEC 306 on the backup router 314 for the primary router 312 according to IP3/MAC3 information assigned to the primary router 312; see FIG. 3, see col. 3, line 25-50; see col. 4, line 44-52); designating a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client (LEC) interface/port 308) for the second physical router (see FIG. 3, for backup router 214) on the first physical router based on the address information assigned to the second physical router (see FIG. 4, S416-420; LES 316 registers/designates LEC 308 on the primary router 312 for the backup router 314 according to IP3/MAC3 information assigned to the backup router 314; see FIG. 3, see col. 3, line 25-50; see col. 4, line 38-42 to col. 5, line 6).

Regarding Claim 18, Alexander discloses a method of setting up router redundancy between a first (see FIG. 3, primary Router 312) and a second physical router (see FIG. 3,

backup router 314), comprising: assigning an IP address to the first physical router (see FIG. 3, IP address 1 (IP1) to primary router 312) and to the second physical router (see FIG. 3, IP address 2 (IP 2) to backup router 314; see col. 3, line 1-15; see FIG. 3, S404, 406, 420; see col. 3, line 7-50; see col. 4, line 38-42 to col. 5, line 6); designating a domain of the first physical router and of the second physical router (see FIG. 3, assigning/designating/registering subnet/domain IP0 of primary router 312 and backup router 314 as default gateway; see col. 3, line 7-34); auto-configuring address information (see FIG. 3, automatically registers/setup IP address 3 (IP3) or MAC address 3 (MAC 3) information) for a virtual router on the second physical router (see FIG. 3, for proxy LAN emulated/virtual client (LEC) 306 on the backup router 306 (i.e. virtual router); see col. 1, line 40-45,56-61; see col. 3, line 15-45) based on the IP address and domain of the first physical router by executing program instructions to communicate between the first and second physical routers (see FIG. 4, S404,406,S408; LES 316 automatically registers/designates address IP3/MAC3 information for a LEC 306 on backup router 314 according to IP1 and subnet/domain IP0 of primary router 312 by executing/processing method/programs (see FIG. 4) to communicates between routers 312 and 314; see col. 3, line 25-50; see col. 4, line 44-52); auto-configuring address information (see FIG. 3, automatically registers/setup IP address 3 (IP3) or MAC address 3 (MAC 3) information) for a virtual router on the first physical router (see FIG. 3, for proxy LAN emulated/virtual client (LEC) 308 on the primary router 312 (i.e. virtual router); see col. 1, line 40-45,56-61; see col. 3, line 15-45) based on the IP address and domain of the second physical router by executing program instructions to communicate between the first and second physical routers (see FIG. 4, 416-420; LES 316 automatically registers/designates address IP3/MAC3 information for a LEC 308 on primary



router 312 according to IP2 and subnet/domain IP0 of backup router 314 by executing/processing method/programs (see FIG. 4) to communicates between routers 312 and 314; see col. 3, line 25-50; see col. 4, line 38-42 to col. 5, line 6).

**Regarding claims 1-15, 18, 20-26, the applicant argued that,** "...applicant is unable to locate anywhere in the Alexander reference, Datta or Perlman references, a teaching, or suggestion of among other things, "a memory device having program instruction executable to: designate a fail-over router interface...of the second physical router" as provided by the applicant's independent claim 1...and "a network management system having a first and a second physical router that includes: means for designation a fail-over router interface....from the second physical router" as provided by applicant's independent claim 7...and "a computer readable medium having a program to cause a device to perform a method that includes: designating a fail-over virtual router interface...to the second physical router" as provided in applicant's independent claim 22..." in pages 12-16.

**In response to applicant's argument, the examiner respectfully disagrees** with the argument above since the combined system Alexander and Datta clearly discloses the claimed invention as set forth above in pages 5-11.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Ian N. Moore  
Art Unit 2616

12-17-07

  
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SUPERVISOR  
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